

Appendix A

Rangeland Suitability for Livestock Grazing Within the Ice Caves Grazing Allotment 8/22/06

Requirements to perform analysis of rangeland suitability were found in NFMA at 16 U.S.C. 1604(g)(2)(A) and were found at 36 CFR 219.20. There is no corresponding manual or handbook direction, however the Rocky Mountain Region 2 Desk Guide was used to as an example to conduct this analysis for the Ice Caves Grazing Allotment. FSM 1905 contains a definition of "Lands Suitable for Grazing or Browsing" as "Lands with vegetation that can be used by grazing animals, both domestic and wild herbivores, without damage to the soil and water resource values."

Rangeland Capability

The definition of rangeland capability was found in 36 CFR 219.3 and is found in FSM 1905 as follows:

Capability: The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current resource conditions and site conditions such as climate, slope, landform, soils, and geology, as well as the application of management practices, such as silviculture or protection from fire, insects, and disease.

Process for Determination of Rangeland Capability

The following process was used to determine the rangeland capability analysis:

1. The analysis began with all lands within the allotment that were National Forest System (NFS) lands. **31,966 acres**
2. Soil types that are dominated by a large percentage of rock outcrop and rubbleland, loose granitic or highly erosive soils were subtracted. **424 acres (rock, other)**
3. Vegetation types that are currently not producing more than 50 pounds of forage/acre were subtracted. **16,706 Acres (Large Tree Single Story, Large Tree Multi-Story, Open Small Tree, and Closed Small Tree)**
4. Lakes were subtracted. **62 acres**
5. Slopes, greater than 45%, were subtracted. **632 acres**
6. The remaining area is capable rangeland with the Ice Caves Allotment. **14,142 acres**

Table A. Acres of Land Determined as Capable for Cattle Use

Classification/Description	Acres Deducted	Running Totals
Net National Forest System Acres		31,966
Deductions for Other Than Capable Acres		
Rock outcrop, rubble land; loose granitic, highly erosive, or very wet soils.	424	31,542
Vegetation types that are producing <50 lbs forage/acre.	16,706	14,836
Lakes, reservoirs, and ponds	62	14,774
Slopes greater than 45%	632	14,142
Total capable for cattle grazing		14,142

Rangeland Suitability

The definition of suitability was found at 36 CFR 219.3 and is found in FSM 1905 as follows:

Suitability: The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses forgone. A unit of land may be suitable for a variety of individual or combined management practices.

Process for Determination of Rangeland Suitability.

The following process was used to determine the rangeland suitability analysis:

Alternative A - Exclosures

1. Areas that were determined to be other than capable, as determined in the capability evaluation above, were subtracted. **17,824 acres**
2. Areas that currently have an overstory of tree canopy cover greater than 60% were subtracted. **5,434 acres (Closed Sapling/Pole). Note – All remaining Transitory range is expected to be suitable for the next 10 years. Consumable forage loss = 146,718 lbs (144 AUM's).**
3. Areas that have a proposed management area prescription allocation that does not allow for livestock grazing. **80 acres (Beaver/waterfowl habitat exclosure in Cave Creek). Consumable forage loss = 6,921 lbs (7 AUM's). Note: Does not include Closed Sapling/Pole which is already deducted in #2.**
4. Fenced recreation areas, developed recreation sites, and/or administrative sites where livestock use has been determined to be incompatible with the primary land use. **26 acres (Peterson Prairie Campground). Consumable forage loss = 0 lbs.**
5. Additional areas the IDT specialists, on the planning team, identified where conflicts occur between livestock grazing and other resources to the extent that the conflicts cannot be resolved or satisfactorily mitigated, and where the other resource values are proposed in the alternative to take precedence over livestock use. **445 acres – 6 exclosures.**

Consumable forage loss = 35,911 lbs (35 AUMs). Note: Consumable forage loss does not include Closed Sapling Pole (15 acres) or Wet Mesic (9 acres) which is already deducted in #2 and #3.

6. Areas where the IDT has determined that livestock grazing is not economically feasible when considering the costs of complying with applicable laws, regulations and Forest Plan standards were subtracted. **0 acres**

Table B. Alternative A: Acres Determined Suitable for Livestock Use

Classification/Description	Acres Deducted	Running Totals
Net National Forest System Acres		31,966
Deductions for Other Than Capable Acres	17,824	14,142
Deductions for Other Than Suitable Acres		
Existing canopy cover >60%	5,434	8,708
M.A. prescription (S&G's) does not provide for grazing (Wildlife Special - IX.).	40*	8,668
Excluded recreation sites	26	8,642
Other areas identified by IDT to be excluded from grazing. (6 exclosures)	421**	8,221
Acres determined to be economically infeasible for livestock grazing.	0	8,221
Total Suitable acres (cattle) for this alternative		8,221***

* Does not include the Closed Sapling Pole acres (40 ac.) which have been previously deducted in Table B.

** Does not include the Closed Sapling Pole acres (15 ac.) or Wet Mesic acres (9 ac. - Wildlife Special – Cave Creek) which have been previously deducted in Table B.

*** 95 percent transitory range. Cost to graze these acres to standard is estimated at \$99,500 (exclosure costs).

Alternative B – Drift Fence

1. Areas that were determined to be other than capable, as determined in the capability evaluation above, were subtracted. **17,824 acres**
2. Areas that currently have an overstory of tree canopy cover greater than 60% were subtracted. **5,434 acres (Closed Sapling/Pole). Note – All remaining Transitory range is expected to be suitable for the next 10 years. Consumable forage loss = 146,718 lbs (144 AUM's).**
3. Areas that have a proposed management area prescription allocation that does not allow for livestock grazing. **80 acres (Beaver/waterfowl habitat exclosure in Cave Creek). Consumable forage loss = 6,921 lbs (7 AUM's). Note: Does not include Closed Sapling/Pole which is already deducted in #2.**
4. Fenced recreation areas, developed recreation sites, and/or administrative sites where

- livestock use has been determined to be incompatible with the primary land use. **26 acres (Peterson Prairie Campground). Consumable forage loss = 0 lbs.**
5. Additional areas the IDT specialists, on the planning team, identified where conflicts occur between livestock grazing and other resources to the extent that the conflicts cannot be resolved or satisfactorily mitigated, and where the other resource values are proposed in the alternative to take precedence over livestock use. **2,711 acres – Drift fence acres and Peterson prairie holding pens. Consumable forage loss = 52,229 lbs (52 AUMs). Note: Consumable forage loss does not include Closed Sapling Pole (204 acres/5,508 lbs/5 AUMs) which is already deducted in #2.**
 6. Areas where the IDT has determined that livestock grazing is not economically feasible when considering the costs of complying with applicable laws, regulations and Forest Plan standards were subtracted. **0 acres**

Table C. Alternative B: Acres Determined Suitable for Livestock Use

Classification/Description	Acres Deducted	Running Totals
Net National Forest System Acres		31,966
Deductions for Other Than Capable Acres	17,824	14,142
Deductions for Other Than Suitable Acres		
Existing canopy cover >60%	5,434	8,708
M.A. prescription (S&G's) does not provide for grazing (Wildlife Special - IX.).	40*	8,668
Excluded recreation sites	26	8,642
Other areas identified by IDT to be excluded from grazing. (Drift fence acres and Peterson Holding Pens)	2,507**	6,135
Acres determined to be economically infeasible for livestock grazing.	0	6,135
Total Suitable acres (cattle) for this alternative		6,135***

* Does not include the Closed Sapling Pole acres (40 ac.) which have been previously deducted in Table B.

** Does not include the Closed Sapling Pole acres (204 ac.) which have been previously deducted in Table B.

***92 percent transitory range. Cost to graze these acres to standard is estimated at \$80,900 (enclosure costs).

**ICE CAVES GRAZING CAPACITY ANALYSIS DETAIL
8/21/2006**

2004 Cages

Cage No	Stand Structure Type	Cage Diameter (feet)	Forage Sample Weight (grams)	Forage Weight (lbs./acre)	Remarks
1	Large Tree Single Story	3.65'	0	0	No forage in Cage
2	Shrub/Seedling	4.00'	1.1	8.4	
3	Closed Sapling/Pole	3.75'	0	0	No forage in Cage
4	Open Sapling/Pole	3.85'	3.6	29.6	
5	Wet Mesic	3.95'	14.8	115.4	
6	Grass/Forbs	3.90'	35.8	287.9	
7	Wet Mesic	3.80'	9.1	77.6	
8	Open Sapling/Pole	3.80'	8.8	74.5	
9	Shrub/Seedling	4.05'	3.4	25.2	
10	Light Forest	3.80'	4.2	35.6	
11	Open Small Tree	3.90'	6.6	53.1	
12	Shrub/Seedling	3.65'	32.2	293.7	
13	Large Tree Single Story	3.90'	9.1	73.2	
14	Open Small Tree	3.90'	5.8	46.6	
15	Closed Small Tree	3.65'	0	0	No forage in Cage
16	Dry Meadow	.96 sq. ft.	30.3	3,030	
17	Dry Meadow	3.90'	201.5	1,706.30	
18	Light Forest	3.80'	75.3	657.5	
19	Large Tree Multi-story	3.85'	0	0	No forage in Cage
20	Closed Small Tree	4.10'	0	0	No forage in Cage
21	Shrub/Seedling	3.75'	18.1	156.7	
22	Open Sapling/Pole	3.75'	14.5	125.6	
23	Closed Sapling/Pole	3.80'	47	398	
24	Open Sapling/Pole	3.80'	72.2	611.4	
25	N/A	N/A	N/A	N/A	Cage never installed
26	Wet Mesic	4.05'	94.9	701.6	
27	Wet Mesic	.96 sq. ft.	37.8	3,780	
28	Wet Mesic	.96 sq. ft.	7.1	710	
29	Grass/Forbs	3.75'	16.3	141.2	
30	Open Small Tree	4.05'	0	0	No forage in Cage
31	Grass/Forbs	3.75'	13.5	117.3	
32	Shrub/Seedling	3.75'	15.6	135.1	
33	Open Sapling/Pole	3.75'	1.4	12.1	
34	Light Forest	3.75'	22.5	194.8	
35	Closed Sapling/Pole	N/A	N/A	N/A	Cage Stolen
36	Large Tree Multi-story	N/A	N/A	N/A	Cage Stolen

37	Open Small Tree	3.85'	3	24.6	
38	Closed Sapling/Pole	3.75'	0.8	7	
39	Shrub/Seedling	3.80'	16.9	143.1	
40	Large Tree Multi-story	3.75'	0	0	No forage in Cage
41	Grass/Forbs	3.75'	103.8	899	
42	Open Sapling/Pole	3.80'	0	0	No forage in Cage
43	Dry Meadow	3.95'	116.6	909	

2005 Cages

1	Dry Meadow	.96 sq. ft.	17.6	1,760	Peterson Prairie (N)
2	Dry Meadow	.96 sq. ft.	36.8	3,680	Peterson Prairie (S)
3	Wet Mesic	.96 sq. ft.	41.2	4,120	So. Prairie (Middle)
4	Wet Mesic	.96 sq. ft.	19.9	1,990	So. Prairie (West)
5	Wet Mesic	.96 sq. ft.	15.3	1,530	So. Prairie (East)
6	Shrub/Seedling		2.3	230	
7	Open Small Tree	3.85'	4.3	44	
8	Light Forest	3.5'	2.6	30	
9	Shrub/Seedling		6.4	44	
10	Open Sapling/Pole	3.80'	0	0	No forage in Cage
11	Dry Meadow	.96 sq. ft.	19	1,900	Lost Meadow (South)
12	Wet Mesic	.96 sq. ft.	15.8	1,580	Lost Meadow (NE)
13	Wet Mesic	.96 sq. ft.	13.1	1,310	Dry Mdw (Deadhorse)
14	Shrub/Seedling		0.5	50	

Structure Class	Gross Acres	Slopes (NFS)>45%	Net Acres	Average Forage Weight (lbs./acre)	Total Forage (lbs./acre)
Large Tree Single Story	440	20	420	36.6*	0
Large Tree Multi-Story	12,225	276	11,949	0	0
Light Forest	495	0	495	229.5	113,603
Open Small Tree	734	0	734	33.7*	0
Open Sap/Pole Closed	3,807	53	3,754	121.9	457,613
Sap/Pole Closed Small Tree	5,527	93	5,434	135**	733,590
Tree	3,679	76	3,603	0	0
Grass/Forbs	840	13	827	361.4	298,878
Shrub Seedlings	3,144	55	3,089	121	373,769
Dry Meadows	70	0	70	2,164	151,480
Water	62	N/A	62	0	0
Rock	466	45	466	0	0
Wet Mesic	474	1	473	1,591	752,543
Total	31,997	632	31,365		2,881,476

